Direct Pro 2496

An In-Depth Look at a Perfectly Integrated Audio Workstation

Aardvark
Superior sound. Simplified.

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Superior sound. Simplified.

The Direct Pro Series

Company Background

Aardvark has over a decade's worth of experience in designing digital audio master clocks that make the world's best recording studios sound even better. The AardSync II low-jitter master clock is known worldwide for improving the sound of Pro Tools™, professional mixers and converters. We've incorporated that expertise into the new Direct Pro Series to give you all the quality of a professional studio, at a fraction of the cost. Our premium sound quality and user-friendly features will change the way you make music and will give you the easy-to-use professional studio you've always wanted.

The Direct Pro Series

The products in the Direct Pro Series were designed to do much more than the typical soundcard/breakout box combination. They were conceived as complete computer audio recording solutions, providing professional audio quality and functioning the way most musicians prefer to work: In real-time with an analog mixer. We went to great lengths to create excellent sounding hardware, tapping into our high-end background of manufacturing outboard converters and low jitter clocks. We also broke new ground with our innovative zero-latency DSP software mixer and discrete microphone preamplifiers, concepts which were previously unheard of in other computer soundcards. The combined sum of our efforts and knowledge was the creation of a completely new and revolutionary line of computer audio recording interfaces: the **Direct Pro Series**.

Direct Mix USB3

3 In/ 3 Out
USB Interface
Noise-Free Audio
Portable Studio
Easy Monitoring
24 Bit A/D
Mic Input
EFR™ Hi-Z In
Self-powered
Headphone Out
Mac, PC & Laptop
Cakewalk software

Direct Pro LX6

4 In/ 6 Out
MIDI In/Out
S/PDIF In/Out
Noise-Free Audio
Real Time DSP FX
Low-Latency
Headphone Out
Powerful DSP
+4 dBu/-10 dBv
24 Bit/ 96 kHz
Shielded PCI Card
Cakewalk Pro Audio 9

Aark 24

10 In / 10 Out
8 Bal In/Out
ADAT In/Out
ADAT Sync
Noise-Free Audio
MIDI In/Out
S/PDIF In/Out
Low-Jitter Clock
Low-Latency
24 Bit
Word Clock In/Out
Cakewalk Pro Audio 9

Direct Pro 24/96

4 In / 6 Out
4 XLR Mic Preamps
4 ¼" Line Inputs
6 Line Outputs
SPDIF In/Out
MIDI In/Out
Real Time DSP FX
Headphone Out
Low Latency
24 Bit/ 96 kH
Shielded PCI Card
Cakewalk Pro Audio 9

Direct Pro Q10

10 In / 10 Out
8 XLR Mic Preamps
8 ¼" Line Inputs
4 Inserts
48v Phantom
10 Line Outputs
2 EFR™ Hi-Z Inputs
Headphone & Monitor
SPDIF In/Out
MIDI In/Out
Word Clock In/Out
Cakewalk Pro Audio 9

The Direct Pro 2496

The Direct Pro 24/96 jump started the direct-to-disk revolution by combining all the pieces of a professional studio into one complete and easy-to-use system. The 2496 rivals an entire studio with its DSP FX for real-time monitoring and 4 low-noise, discrete transistor mic preamps that deliver transparent & detailed professional quality audio to any computer. A tightly integrated, DSP driven software mixer means an outboard mixer is no longer required to create fantastic mixes. The handy headphone jack allows you to monitor with ease. Everything you need to capture professional quality digital audio into your computer is right in this one, fully integrated and truly professional system.

The combination of discrete transistor mic preamps, 24 bit,/96 kHz converters, shielded PCI card and Aardvark's legendary digital clocking technology guarantees the audio quality is second to none. The flexibility of the hardware completely replaces an outboard mixer, so you can record directly to the computer without sacrificing audio quality or studio functionality.

The DSP Control Panel for the 2496 uses the powerful DSP Processor on the PCI card, so your computer keeps running lightning fast and completely in real-time. It's laid out much like an analog mixer so it's super easy to use, and leaves native power for you to run more plug-ins and other effects processing. No other system has the brainpower of the 2496 that does so much, so easily.

Feature List

Hardware	*Software*
4 In / 6 Out Computer Audio Interface	Zero-Latency Monitoring
4 Discrete Transistor XLR Mic Preamps	10 Channel Real-Time DSP Mixing
4 ¼" Balanced Line Inputs	3-Stage Input Level Gain
4 ¼" Balanced Line Outputs	Snapshot Preset Recall
2 RCA Line Outputs	DSP Powered Digital & VU Meters
48 Volt Phantom Power	DSP Effects – Reverb, EQ & Compressor
24 Bit, 96 kHz AD / DA	Pan / Solo / Mute and Level Faders
S / PDIF Digital I / O	Drag-n-Drop Digital Patch Bay
MIDI I / O	True Multi-Client Driver
¼" Headphone Out	Simultaneous ASIO, GSIF, Dir X, MME
Shielded PCI Card	4 Color Schemes for the Control Panel
Aardvark Low-Jitter Clock	Selectable +4dBu / -10dBv
Powerful On-Board DSP Processor	Low-Latency ASIO2, GSIF, MME, DirectSound
Shielded 25-Pin Cable	ASIO Turbo Mode for Soft Synths
Rugged Breakout Box	Windows 95 / 98 / ME / 2000 / NT / XP
Expandable up to 4 Units (16 In / 24 Out)	Bundled with Cakewalk™ Pro Audio 9 (full version)

Compatible Software

2496 Hardware Features

The 2496 has a unique combination of the great sounding, flexible hardware & brilliant DSP powered software. But for anyone that knows Aardvark, they know of the great reputation for amazing sounding audio hardware. The 2496 embodies all of Aardvark's great hardware technologies to bring to you one of the highest quality systems available.

The biggest selling point, and there are many, is that the 2496 has 4 clever inputs that will accept either 4 XLR mic inputs or 4 ¼" line level inputs, or any combination of the two. This gives you the ultimate in flexibility, including professional condenser microphones, to let you do all the work right in your computer without worry of quality or connectivity.

The Direct Pro 24/96's unique input connectors will accept any XLR microphone or ¼" line level input

4 Discrete Microphone Preamps

The mic preamps in the 2496 are a hand crafted, discrete transistor design that yields outstanding noise specs and pristine sound quality. Most other manufacturers soundcards use standard "mic-pre-on-a-chip" solutions, which are not discrete and can lack the clarity and definition needed for professional use. All 4 even have phantom power for condenser microphones. These are shielded in the breakout box and combine with top of the line converters to deliver professional audio quality from your mic's to your computer.

Convenient Headphone Output

It wouldn't be possible to professionally record to your computer unless you had convenient, pro quality monitoring. The 2496 has a headphone out right on the front of the unit to give you all the control over your mixes. The headphone gain is easily adjustable via the DSP software, which also does the real-time mixing of 10 channels to help you create the perfect mix.

The Direct Pro 24/96 Back Panel has 6 analog outputs, MIDI and a solid connection to the system's PCI card.

6 Analog Outputs

The rear-panel of the breakout box features 4 analog main outputs with 24 bit, 96 kHz +4dBu on 1/4" TRS jacks and 2 additional outputs on RCA jacks. All 6 outputs can be used simultaneously to take to a mixer or outboard effects units. These give excellent mix down flexibility and provide plenty of connectivity to the rest of your studio. The 2496 units 6 outputs are even perfect for *surround sound* mixing.

MIDI In & Out

If you use MIDI instruments in your studio (like synthesizers, drum machines, etc) and want to integrate them with your digital audio system, then you'll really like the Direct Pro 24/96 built-in MIDI interface. The Direct Pro 24/96 breakout box features both a MIDI In and MIDI Out jack so you can send MIDI data to and from your favorite synth! And since the audio and MIDI are integrated in one box, your guaranteed perfect audio/MIDI syncronization.

Shielded PCI Card & S/PDIF Digital I/O

Only Aardvark provides custom shielding on our PCI cards. Both the breakout box and the PCI card are designed to be completely noise free. This extra shielding keeps harmful computer noise out of your precious audio to give a pristine, high quality sound.

The 2 RCA connections on this PCI card provide the 24 bit, 96kHz digital in and out to your computer for lossless digital audio transfers from outboard digital audio gear. A must have for any pro or project studio.

Expandable

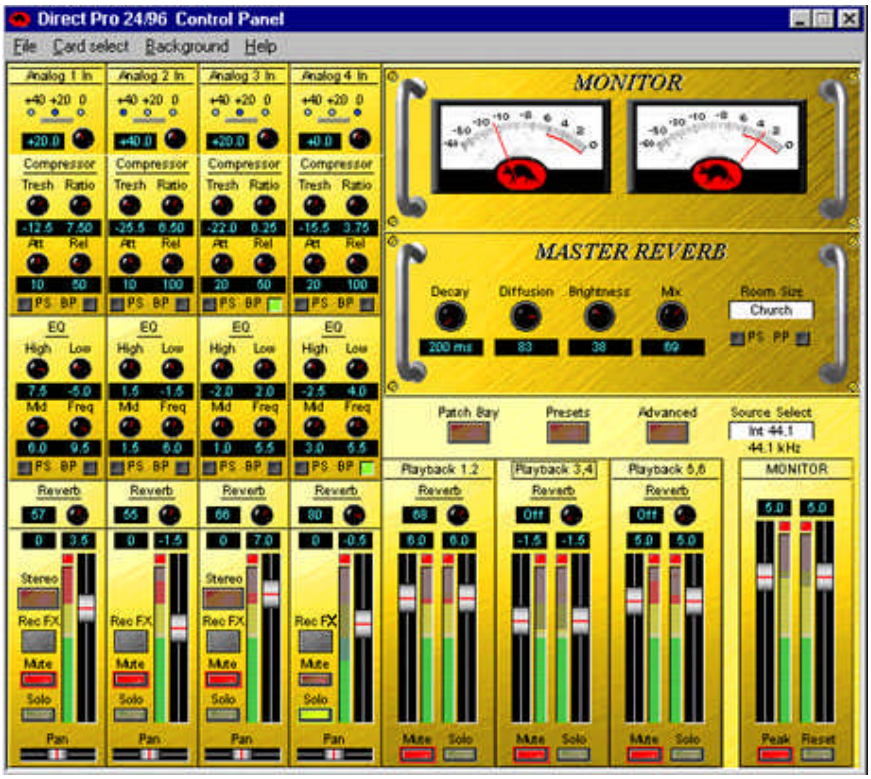
If you feel like expanding your Direct Pro 24/96 system, you can expand up to 4 units into one computer. In fact, all Aardvark audio interfaces can be expanded up to 4 units…mix and match! No other line of computer interfaces allows as much flexibility and expansion as the Aardvark Direct Pro Series.

2496 Software Features

Aside from the great sounding hardware, the 2496 sets itself apart from other interfaces by have a fully-DSP powered software control panel. This control panel is packed with user friendly features, and is laid out just like an analog mixer with stereo monitor outputs. The hardware & software combination of the 2496 truly replaces every aspect of having an analog mixer, audio interface, and 3 cool effects units, so you can monitor in real-time while you record direct to the computer with ZERO-latency! This also frees up power for the native processor so you can record more tracks and use more plug-in effects processors.

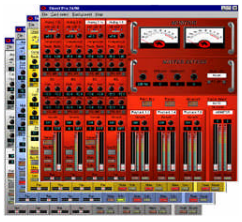
2496 Control Panel

The brain of the 2496 is the DSP powered Control Panel, which is designed to replace the need for an external hardware mixer, while still providing real-time mixing and easy monitoring that you get with an analog mixer. All the features in it are powered by the DSP processor on the PCI Card. So the mixing, monitoring and metering won't slow down your computer. It works in a very similar way as an outboard mixer, and works in combination with the 2496 hardware to provide a total digital mixing solution that includes flexible routing, zero-latency monitoring, snapshot preset recall, input level trim, , +4/-10 selectable I/O and true digital peak metering.



The Direct Pro 2496 Control Panel
Powered by the an onboard DSP Processor

The Direct Pro 2496 Control Panel is the DSP software control interface that completely controls the hardware. It has complete mixing capabilities built right into it and is extremely easy to use. The Control Panel is laid out just like a mixer and functions almost exactly as if you had a small mixer sitting next to your computer. It can be seen as a 10 channel mixer with a 2 channel monitor output that can be routed to any of the 6 line outputs or the headphone output for monitoring. 6 of the channels are from the physical 6 inputs of the box (4 analog and 2 digital), and the other channels are from the software application. Any combination of previously recorded audio tracks can be played back, mixed and monitored individually or in subgroups, while simultaneously recording additional audio tracks from the 2496. This control panel even comes in 4 cool colors that you can change as often as you'd like. This lets you match it to your studio, or makes life easy on the eyes during an all night recording session.

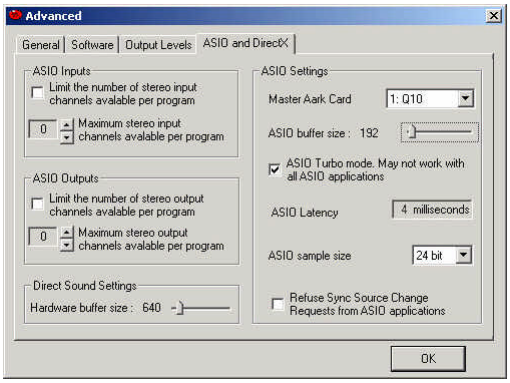


Compressor, EQ & Reverb

The Direct Pro 24/96's real-time, on-board DSP effects are also accessed via the software mixer. The 100% DSP generated Reverb/Echo, Compressor/Limiter, and Multi-band EQ allow you to add effects to incoming audio "on-input" while recording in real time with no-latency -- just where you need it most! You can choose between simply monitoring the effects while recording "dry" to multitrack software, or you may record our DSP effects by hitting the REC FX button! You can also choose to audition the effects individually with the effects bypass feature.

3-Stage Input Gain

The input trim (found at the top of each mixer strip on the 2496 Software Control Panel) provides up to 75dB gain on the mic inputs. This gain is done in the analog stage (pre A/D conversion), just like an analog mixer would do. In contrast, most other audio cards provide a minimal amount of gain after the A/D, which dramatically increases the noise. The 2496 software avoids this by sending commands to the analog circuitry in the breakout box to get the best sound possible. This actually has 3 separate gain stages, which are each optimized for that particular gain range to give you the best possible sound.


Advanced
General Software Output Levels ASIO and DirectX
ASIO Inputs
Limit the number of stereo input channels avalable per program
Maximum stereo input channels avalable per program
ASIO Outputs
Limit the number of stereo output channels avalable per program
Maximum stereo output channels avalable per program
Direct Sound Settings
Hardware buffer size : 640
ASIO Settings
Master Aark Card
1: Q10
ASIO buffer size : 192
ASIO Turbo mode. May not work with all ASIO applications
ASIO Latency
4 milliseconds
ASIO sample size
24 bit
Refuse Sync Source Change Requests from ASIO applications
OK

ASIO Turbo Mode

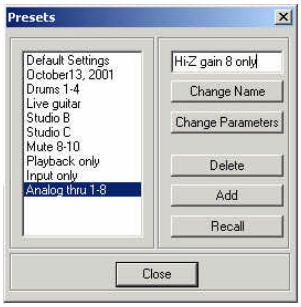
Our enhanced ASIO2 driver provides some of the best latency performance in the industry. Down to 4ms or less with some applications such as software synths and VST instruments. Great for real-time performance.

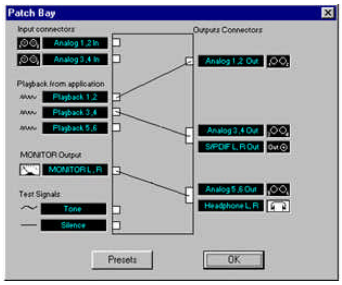
ASIO Buffer Slider

Not only is the ASIO driver really efficient, but it has a unique 31-step ASIO Buffer Slider which lets the user dial in the exact buffer size that is optimal for his computer. No other card goes this far to get real-time performance.

Snapshot Preset Recall

Hitting the Presets button on the Control Panel activates the Presets window, which lets you save an unlimited number of screen shots to recall at any time later. This is particularly useful when you need to change the patch bay settings or the input levels for different studio sessions. Saving different preset mixes you can get up and running in no time.



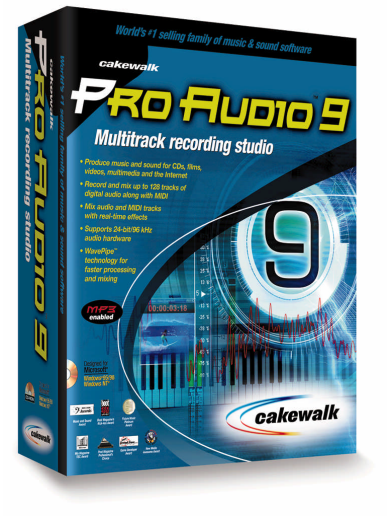


Output Routing (Patch Bay)

This patch bay gives the user broad routing flexibility allowing routing of any input signal (as well as the DSP monitor mix) to any output (including the headphone output) in real time with no latency. The right hand choices are the physical outputs, so just drag the source (on the left) to where you want it to go. Tone and Silence signals can also be routed to any output for calibration purposes and system checks.

Software Bundle: Cakewalk Pro Audio 9.0

The 2496 is bundled with a full version of Cakewalk Pro Audio 9.0, an excellent multi-track audio recording and MIDI sequencing software:



Record & mix up to 128 tracks of audio
Full featured MIDI sequencer
Supports 24 Bit/ 96kHz
Real Time Effects
MP3 Enabled
Import and sync digital video to audio
Edit & Print Notation w/ Guitar Tablature
Real -Time Guitar Fretboard display
Time Expansion/Compression
Audio -to-Midi Conversion
Fade/Envelope & Crossfade
Direct X Plug -In compatible
Parametric EQ, Reverb, Delay/Echo
Flange, Chorus, Pitch Shifting
Vintage Amp Simulation

The 2496 Package

Included in the 2496 package you'll find:

1) Shielded PCI Card
2) ½Rack Breakout Box
3) 6' 25-pin Cable
4) 2496 Manual
5) Cakewalk Pro Audio 9 CD
6) Registration Cards
7) Manual & Quick Start Guides

2496 Specifications

Converters:	24 Bit, 96 kHz A/D D/A Shielded
THD+N:	.002% @1kHz
Dynamic Range:	110 dB D/A, 100 dB A/D
Frequency Response:	7 Hz-44kHz, +/- .5 dB at 96 kHz
Sample Rates:	32 kHz, 44.1 kHz, 48 kHz, 96 kHz
Analog Inputs:	4 Inputs Total 4 XLR Discrete Mic Preamp w/ Input trim or 4 ¼" Balanced Line (+4 dBu/-10 dBv) w/ Input Trim
Mic Preamp	Discrete, 8 Transistor Design , w/ Phantom Power Freq Response at –3dB; 1.6Hz-200kHz EIN at 20-20kHz, 150 Ohm: -0130 dBu THD at 20dB gain; 0.0005%
Analog Outputs:	4 Balanced ¼" Line (+4 dBu) + 2 RCA (–10dBv) 1 ¼" Headphone Output
Digital I/O:	24 Bit, 96 kHz S/PDIF In/Out on RCA connectors
MIDI I/O:	Midi In/Out on Standard 5-pin DIN
Modes:	Full Duplex Simultaneous Rec/Play
Expansion:	Up to 4 systems can be installed in the same computer
Card Type:	PCI Bus Architecture, 5" Length
On Board DSP:	24 Bit, 80 MIPS
Connections:	6" Shielded 25 pin connector

THE DIRECT PRO SERIES

'Simply The Best Hardware For Your Software'
Steinberg, Cakewalk, Emagic, Sonic Foundry, SEK'D, Syntrillium

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